



# Gefentv

Extender for **HDMI 1.3** over **CAT6**

GTV-HDMI1.3-CAT6

User Manual

[www.gefentv.com](http://www.gefentv.com)

**1080P**  
PROGRESSIVE

**HDMI**  
High Definition Multimedia Interface

**HD TV**

**Blu-ray Disc**  
™



## ASKING FOR ASSISTANCE

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### Notice

Gefen Inc. reserves the right to make changes in the hardware, packaging and any accompanying documentation without prior written notice.

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# INTRODUCTION

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Congratulations on your purchase of the Extender for HDMI 1.3 Over CAT-6. Your complete satisfaction is very important to us.

## **Gefen TV**

Gefen TV is a unique product line catering to the growing needs for innovative home theater solutions. We specialize in total integration for your home theater, while also focusing on going above and beyond customer expectations to ensure you get the most from your hardware. We invite you to explore our distinct product line and hope you find your solutions. Don't see what you are looking for here? Please call us so we can better assist you with your particular needs.

## **The Gefen TV Extender for HDMI 1.3 Over CAT-6**

The GefenTV HDMI 1.3 Over CAT6 Extender sends HDMI signals over just two unobtrusive CAT6 cables -- up to 150 feet away. The GefenTV HDMI 1.3 Over CAT6 Extender supports HDMI 1.2 and the newer HDMI 1.3 with features such as Deep Color, 1080p and uncompressed 7.1 audio. DVI-D Computer video can also be transmitted with a DVI-to-HDMI cable (please see the optional accessories).

By using standard and widely available CAT6 cables, the GefenTV HDMI 1.3 Over CAT6 Extender makes HDMI signal extensions easier than with heavy and expensive copper cables and more robust than with optical fiber. The Extender's pure digital transmission method insures 100% signal integrity over extended distances.

## **How It Works**

The GefenTV HDMI 1.3 Over CAT6 Extender system consists of a sender and a receiver. The HDMI source (set-top box, DVD player, or gaming console) connects to the sender box with the supplied 6-foot HDMI cable. The receiver box connects to the HDTV display in the same way -- up to 150 feet away. Two CAT6 cables link the sender and receiver. Power is applied to the sender and receiver with the included 5V DC power supplies. A crisp, flawless HDMI picture emerges on the HDTV display.

Note: The GefenTV HDMI 1.3 CAT6 Extender is HDCP compliant.

## OPERATION NOTES

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### READ THESE NOTES BEFORE INSTALLING OR OPERATING THE EXTENDER FOR HDMI 1.3 OVER CAT-6

- The distance at which the Extender for HDMI 1.3 Over CAT-6 will carry a signal will vary depending on the source's resolution and features.
  - 20m (66 feet) -- HDMI 1.3 w/Deep Color/1080p, Dolby TrueHD or DTS-HD losless multi-channel audio
  - 30m (99 feet) -- HDMI 1.2 at 1080p with Multichannel Audio
  - 45m (148 feet) -- HDMI 1.2 at 720p or 1080i with Multichannel Audio
- All stated distances are for use with CAT-6a (Augmented CAT-6) cabling that is terminated according to the ANSI/TIA/EIA-568B specification. CAT-5e and CAT-6 cable can be used but distance ratings will be shortened. ANSI/TIA/EIA-568A termination can be used but may cause marginal distance loss.
- Both CAT-6a cables (VIDEO and DDC) must be used for extension.
- HDMI 1.3 compliant. Please see page 3 for a list of supported HDMI 1.3 features.
- HDCP compliant.

# FEATURES

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## Features

- Flexible extension of high-bandwidth HDMI 1.3 thanks to the performance and reliability of CAT-6a cable.
- Audio and video are transmitted digitally over the CAT-6a cable for zero signal loss.
- Single Link Range: 1080p/60, 12 bit color depth, 1920x1200.
- Compliant with HDMI 1.3, HDCP 1.1 and DVI1.1 standards
- Supports digital video formats in Deep Color Mode at up to 12bits/color
- Supports lossless compressed digital audio (Dolby TrueHD, Dolby Digital Plus and DTS-HD Master Audio)
- Equalizes and recovers incoming TMDS data before re-transmitting the signal with optimal quality regardless of the incoming signal quality
- Eliminates equipment noise in the viewing environment
- Improved compensation for cable skew

## Features

- Lip-Sync Pass Through
- 225 MHz (up to 12 bit YUV 444 Supported @ 1080p)
- Deep Color Supported (XV Color Supported)
- Dolby TrueHD & DTS-HD Master Audio Supported
- CEC Pass Through & xvYCC Supported

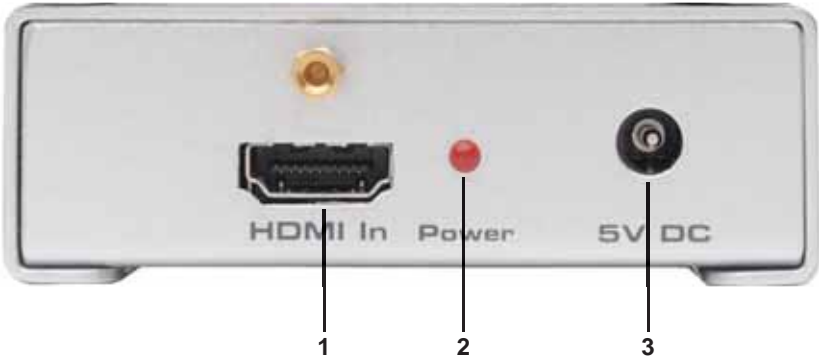
## Package Includes

- (1) GefenTV Extender for HDMI 1.3 over CAT-6 Sender
- (1) GefenTV Extender for HDMI 1.3 over CAT-6 Receiver
- (1) 6 Foot HDMI Cable (M-M)
- (2) 5V DC Power Supply
- (1) User's Manual

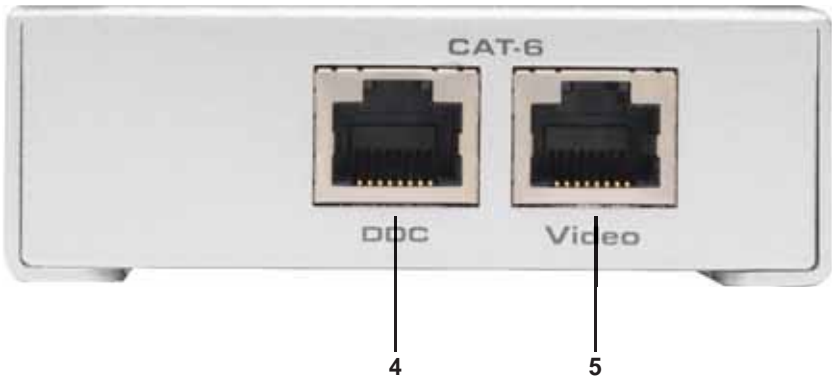
# SENDER UNIT PANEL LAYOUT

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## Front Panel



## Back Panel





## SENDER UNIT PANEL DESCRIPTIONS

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**1 HDMI Input Port**

Connect the HDMI source to this input port.

**2 Power Indicator LED**

This LED indicator will become active once the included 5V DC power adapter has been properly connected between the sender unit and an open wall power socket.

**3 5V DC Power Input Port**

Connect the included 5V DC power supply to this input port.

**4 CAT-6a Port (DDC)**

Connect a ANSI/TIA/EIA-568-B terminated CAT-6a cable between this DDC port and the DDC port on the receiving unit.

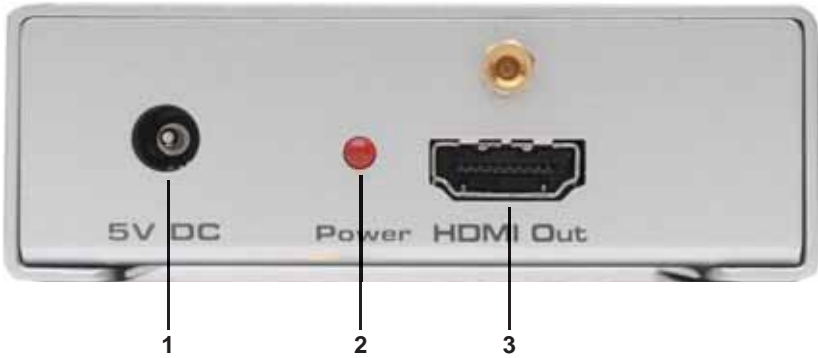
**5 CAT-6a Port (VIDEO)**

Connect a ANSI/TIA/EIA-568-B terminated CAT-6a cable between this VIDEO port and the VIDEO port on the receiving unit.

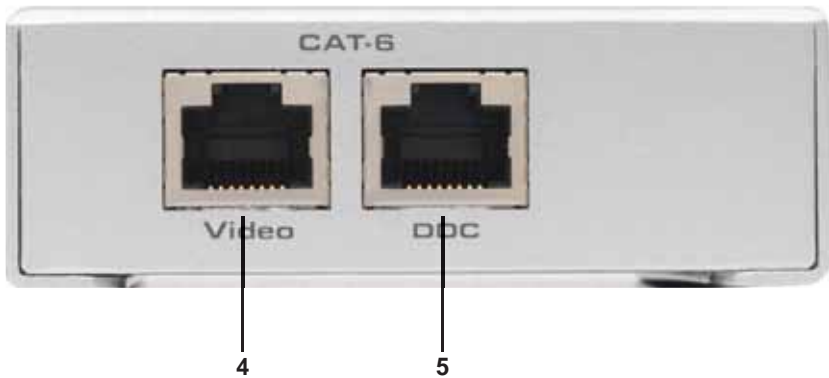
# RECEIVER UNIT PANEL LAYOUT

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## Front Panel



## Back Panel



## RECEIVER UNIT PANEL DESCRIPTIONS

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**1 5V DC Power Input Port**

Connect the included 5V DC power supply to this input port.

**2 Power Indicator LED**

This LED indicator will become active once the included 5V DC power adapter has been properly connected between the sender unit and an open wall power socket.

**3 HDMI Output Port**

Connect the HDMI capable output device to this port.

**4 CAT-6a Port (VIDEO)**

Connect a ANSI/TIA/EIA-568-B terminated CAT-6a cable between this VIDEO port and the VIDEO port on the sending unit.

**5 CAT-6a Port (DDC)**

Connect a ANSI/TIA/EIA-568-B terminated CAT-6a cable between this DDC port and the DDC port on the sending unit.

# CONNECTING AND OPERATING THE EXTENDER FOR HDMI 1.3 OVER CAT-6

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## How to Connect the Extender for HDMI 1.3 Over CAT-6

1. Connect the HDMI source device to the Extender for HDMI 1.3 Over CAT-6 sender unit using the supplied HDMI cable.
2. Connect one pair of CAT-6a\* cables between the VIDEO and DDC ports on the sender and receiver.

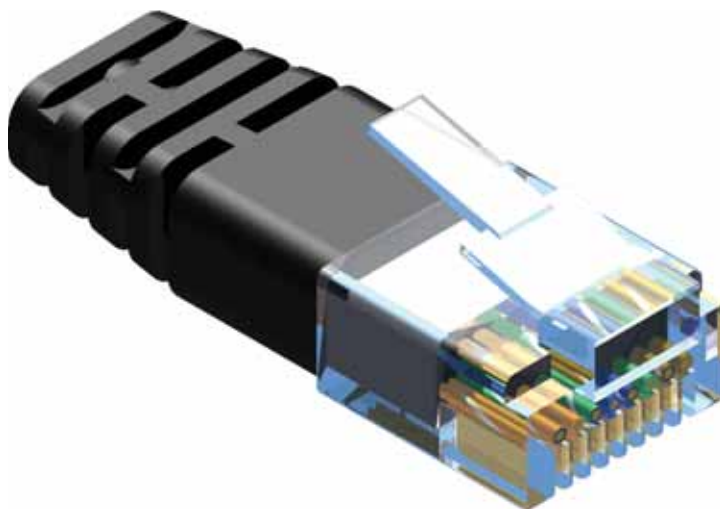
**\*NOTE:** This product was designed for use with CAT-6a (Augmented CAT-6) cabling that is terminated according to the ANSI/TIA/EIA-568B specification. CAT-5e and CAT-6 cable can be used but distance ratings will be shortened. ANSI/TIA/EIA-568A termination can be used but may cause marginal distance loss.

3. Connect the HDMI capable output device to the Extender for HDMI 1.3 Over CAT-6 receiver using a user supplied HDMI cable.
4. Connect the included 5V DC power supplies to both the sender and receiver units.
5. Power on the output device first and the source second.

## How to Operate the Extender for HDMI 1.3 Over CAT-6

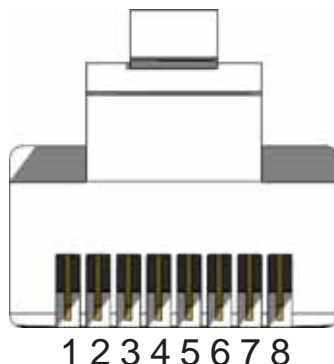
There are no further steps or configuration needed to operate the Extender for HDMI 1.3 Over CAT-6.

## NETWORK CABLE WIRING DIAGRAM



Gefen has specifically engineered their products to work with the TIA/EIA-568-B specification. Please adhere to the table below when field terminating cable for use with Gefen products. Failure to do so may produce unexpected results and reduced performance.

Pin	Color
1	Orange / White
2	Orange
3	Green / White
4	Blue
5	Blue / White
6	Green
7	Brown / White
8	Brown



CAT-5, CAT-5e, and CAT-6 cabling comes in stranded and solid core types. Gefen recommends using solid core cabling. CAT-6 cable is also recommended for best results.

Each cable run must be one continuous run from one end to the other. No splices or use of punch down blocks.

## SPECIFICATIONS

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Video Amplifier Bandwidth .....	225 MHz
Video Output .....	1080p/60, 12 bit color depth, 2k and 1920x1200 max. res
Input DDC Signal .....	5 Volts p-p (TTL); Input Video Signal: 1.2 Volts p-p
HDMI Connector .....	Type A, 19 Pin Female
Link Connector .....	RJ-45 Shielded
Power Supply .....	5V DC / Power Consumption: 20 Watts max.
Operating Temperature .....	0°C - 40°C
Shipping Weight .....	3 lbs. / Unit Weight: 190 grams (pair)
Dimensions .....	2" W x 1" H x 2.1" D